

New Zealand weather and climate news

Courtesy of MetService library

(MetService focus)

Cold snap moving up country brings threat of snow to high routes, with more to follow

Stuff.co.nz

MetService is forecasting snow to 600 metres in the Canterbury High Country on Tuesday and to 900m on Wednesday. Snow is also predicted to get ...

Chilly southwesterly weather forecast for Whanganui

New Zealand Herald

Metservice meteorologist Mmathapelo Makgabutlane said there had been dynamic atmosphere over the Tasman Sea which had seen several fronts ...

A mighty wind hits Pukenui

New Zealand Herald

The **MetService** had predicted that tornadoes were possible on Thursday, and any doubting Thomases at Pukenui became firm believers at around ...

Weather warning: Heavy rain, 'damaging winds' and thunderstorms coming for North Island

Newshub

MetService warns heavy rain, "damaging winds" and thunderstorms may rattle the upper North Island on Sunday afternoon. The active front could ...

Coming thunder and hail off-brand for a warm winter

Stuff.co.nz

MetService data from New Zealand's main centres show that each month of winter - June, July, and August-so-far - has been warmer than average.

Rain and strong winds coming early this week

SunLive

The **MetService** report that a complex low pressure system is expected to move east across New Zealand on Monday and early Tuesday, bringing rain ...

'Antarctic blob' **weather** system chilling Australia, keeping **New Zealand** warm for now

Stuff.co.nz

Senior **meteorologist** Ben Domensino, from commercial **weather** information provider Weatherzone, linked the wintry blast, which includes damaging ..

Hawke's Bay weather: Winds and swells to calm as benign weekend approaches

New Zealand Herald

MetService meteorologist Tui McInnes said almost all parts of the region would have felt the gusts on Friday. The biggest gust of wind in Hawke's Bay ..

MetOcean (and oceanmet, marine weather etc)

Climate change could mean trouble for surf breaks

About 80 percent of the surf breaks in California could be gone by the end of the century, according to research into rising sea levels.

BAE Systems Australia to support Hydrographic Office

Australian Defence Magazine

BAE Systems **Australia** has secured a three-year, \$10 million contract to support the **Australian** Hydrographic Office (AHO) ICT systems so ... Meteorology and **Oceanography** (METOC) Information Environment (HMIE); which is an ...

NIWA

Poor snow cover in many areas during one of warmest winters on record; some more could fall overnight

The winter of 2020 looks likely to have been one of the three warmest on record, and snow coverage in many areas has been poor, Niwa says.

WMO

China's first upper-air UAV integrated typhoon sounding experiment

Posted:

On the afternoon of August 2, during the impact of this year's 3rd typhoon Sinlaku on Hainan, an upper-air meteorological Unmanned Aerial Vehicle (UAV) lifted off from Boao Airport and dropped off 30...

Atlantic hurricane activity intensifies

Posted:

An already active Atlantic hurricane season is entering what is traditionally its most intense phase.

World Meteorological Organization

ECMWF

How much is COVID-19 impacting forecast model accuracy?

Minnesota Public Radio News

The **ECMWF** estimates a 15% reduction in model forecast accuracy in wind and temperature forecasts at flight levels if all aircraft data is removed.

Extreme weather (and other news) – Australia and the Pacific

Weather bureau predicts La Nina this summer, in stark contrast to last year

7NEWS.com.au

Unlike **El Nino** years, the impacts of La Nina often continued into the warm months, the BOM said. In eastern Australia, the average December-March ...

Extreme weather (and other news) – North America and Europe

History repeats itself with storms hitting Florida and Texas at the same time

WPEC

"First question a lot of **meteorologists** had around the country was, 'okay. Has this ever happened before?' This is wild, I mean, everyone is wondering ...

Fast-Moving California Wildfires Boosted by Climate Change

Nearly two dozen large blazes have burnt more than 1 million acres of the state

International news and research

RIKEN and JAXA Collaborate to Offer Real-Time Rainfall Forecasts

HPCwire

They began by developing a system—using “data assimilation”—to incorporate observational data, from **weather satellites**, into a type of forecasting ...

The most reliable hurricane models, according to their 2019 performance

Yale Climate Connections

ECMWF forecasts from the **ECMWF** web site; – FSU's model page (CMC, **ECMWF**, GFS, GFS HWRF, HMON, and NAVGEM models); – NOAA's HWRF ...

Aviation Secy Inaugurates Weather, Flood E-mail Alert System At PMD Lahore

UrduPoint News

During his visit to the PMD, the secretary also got briefing about the functions of Flood **Forecasting** Division and flood **prediction** mechanism of the ...

Ozone across northern hemisphere increased over past 20 years

Posted: 21 Aug 2020 11:13 AM PDT

In a first-ever study using ozone data from commercial aircraft, researchers found that levels of the pollutant in the lowest part of Earth's atmosphere have increased across the Northern Hemisphere over the past 20 years. That's even as tighter controls on emissions of ozone precursors have lowered ground-level ozone in some places, including North America and Europe.

Understanding how birds respond to extreme weather can inform conservation efforts

Posted: 21 Aug 2020 09:00 AM PDT

How do different bird species respond to extreme weather events that occur for different amounts of time, ranging from weekly events like heat waves to seasonal events like drought? And how do traits unique to different species -- for example, how far they migrate or how commonly they occur -- predict their vulnerability to extreme weather?

Storm Surge: The Science behind This Year's Unusual Hurricane Season

Meteorologist J. Marshall Shepherd explains Hurricane Laura in the Gulf of Mexico and the ingredients for tropical cyclones

Stronger, Wetter, Slower: How Hurricanes Will Change

Experts show how 22 recent hurricanes would be different if they formed near the end of this century

Q&A: High-tech weather data is becoming key to decision making

Digital Journal

... the science of **weather forecasting** is because there exists a strong relationship ... DJ: How are companies using weather **data** as part of their digital ...

Aviation

NOAA Satellites New Data Warns Alaska Pilots of Clouds, Dangerously Cold Weather

SpaceCoastDaily.com

(NASA) – A new product that alerts pilots to clouds, icy conditions, and dangerously cold temperatures is tapping into NOAA's Joint Polar **Satellite** ...

Business/Insurance

Earth and marine observation worth billions to Asia Pacific

Consultancy.asia

“Across the APEC region, EMO-enabled **technologies** are estimated to have ... On the consumer side, only **weather forecasting** was included in the ..

WeatherFlow Revolutionizes Real-Time, Personal Weather Forecasting With the All New Tempest ...

PRNewswire

"Better **data** and forecasts then lead to a host of positive outcomes. Beyond the direct benefits to a Tempest owner from a better forecast, the collective ...

Skyview Signs Weather Channel to Sales Agreement

Radio World

The **Weather Channel** and Skyview Networks announced an agreement intended to help the weather content provider expand its radio network sales .

Recovery From Freak Tornado Storm Sees Insurance Customers Claim \$10.8m

Scoop.co.nz

While the suddenness of this **weather** event didn't provide time to prepare, ICNZ has some simple steps to follow to help minimise storm damage: ..

Covid-19 / Business

Re-emergence of coronavirus creates additional uncertainty - NZIER Quarterly Predictions, September 2020

NZIER forecasts the effects of COVID-19 will persist well into 2023, as the recent re-emergence of COVID-19 in the community adds to the already highly uncertain outlook. The new restrictions have hampered the recovery in activity seen in recent weeks as New Zealand moved down alert levels. Although retail spending had rebounded in the months following the relaxation of lockdown restrictions, the recent increase in spending has yet to make up for the decline experienced during the lockdown.

Agile business most likely to weather pandemic well, PwC study shows

Creamer Media's Engineering News

The latest survey, covering 53 countries, shows that some private businesses are performing better under pressure. The survey identified companies that ...

Energy and Mining

If **weather** pattern becomes the new norm, electric companies 'will continue to struggle,' report says

Morning Call

PPL notes its investment in new **technologies** and use of “smart grid devices” dramatically improved the ability to quickly restore power to customers.

Farming/horticulture/Aquaculture

Protecting 2020 Fruit Crops from Environmental Stress by Enhancing Their Natural Defenses

PRNewswire

21, 2020 /PRNewswire/ -- The **weather** can't be controlled, but breakthrough **technologies** are protecting crops from the effects of **weather** conditions, ...

AgriFood **innovation** helping to mitigate the impact of climate change

hortidaily.com

But some of these changes in **weather** patterns are already impacting societies and industries around the globe, including the devastating 2019-20 fire .

Health

Thunderstorms might induce respiratory emergencies for those 65 and older, a study says

Washington Post

The analysis combined **insurance** and Medicare data associated with acute respiratory diagnoses during ER visits with **weather** data from the National Oceanic and Atmospheric Administration for all counties within the continental ...

History

A bomber pilot's daring flight: Marking 100 years since the first Cook Strait air crossing

The first plane to cross the Cook Strait was flown by a wartime bomber pilot, who plotted the journey in secret to beat the famous Walsh brothers to the punch.

Daring adventure across Cook Strait recreated 100 years on, to the minute

The thwack-thwack-thwack of the NH90 military helicopter blades destroyed the 1920 vibe somewhat and the iPhone sticking out of the pilot's pocket seemed a tad off.

Hydrology / Flooding

Contagion model predicts flooding in urban areas

Posted: 24 Aug 2020 11:44 AM PDT

Inspired by the same modeling and mathematical laws used to predict the spread of pandemics, researchers have created a model to accurately forecast the spread and recession process of floodwaters in urban road networks. With this new approach, researchers have created a simple and powerful mathematical approach to a complex problem.

Innovation and technologies and AI

Digital **technology** could revolutionise agriculture, webinar on farm told

fbnnews.com

Digital agriculture - where farmers can use digital **technologies** to access useful information, particularly on **weather**, could revolutionise the ...

Lightning

Australia fires: Similar or worse disasters 'will happen again'

BBC News

Overall, most bushfires were caused by **lightning** strikes and embers from other blazes. There were just 11 instances of people deliberately attempting to ...

Satellites and radar

NOAA surveys market for commercial **weather** data sources

SpaceNews

NOAA surveys market for commercial **weather** data sources. by Debra Werner — August 21, 2020. NOAA's GOES-West **satellite** captured the above ..

Weather predictions witness a low error rate after the inception of COSMIC-2 and Spire Global.

Daily Research Chronicle

Additionally, commercial **satellite** operators and analysis companies like Spire Global delivered information concerning **weather** to ECMWF and other ...

VOLCANO WATCH: The **Doppler Radar** In Ka‘ū Is More Than A **Weather Radar**

Big Island Video News

KA‘Ū, Hawai‘i - This week's Volcano Watch article explains the use of the Nā‘ālehu Weather Surveillance **Doppler radar** in tracking the volcanic ...

Weather in pictures

26 dramatic shortlisted images for Weather Photographer of the Year

Evening Standard

To capture the best of the world's weather events, The Royal Meteorological Society (RMetS), in association with **AccuWeather** asked photographers ...

Odd spot

'Snowing chocolate' seen in Switzerland after factory malfunction

Wednesday, August 19th 2020, 4:00 pm - High winds and a technical issue at the Lindt & Sprüngli factory created 'snowing chocolate' in a small town in Switzerland.

Journal and articles online

Australian Journal of Emergency Management

The latest edition of the *Australian Journal of Emergency Management* features news, views and new research on supporting disaster risk reduction frameworks in Australia and New Zealand.

The generalized Ekman model for the tropical cyclone boundary layer revisited: The myth of inertial stability as a restoring force

Roger K. Smith, Michael T. Montgomery

Version of Record online: 11 August 2020

Tangential wind profiles as a function of radius. This profile has the form $v_g(r) = v_1 s / (1 + s^x)$, where $s = s_m r / r_m$, r is the radius, $r_m = 50$ km and s_m and v_1 are constants chosen to make $v = v_{gm}$, the maximum tangential wind speed, when $r = r_m$. The red curve has $x = 1.6$, and blue curve

has $x = 2.3$. The thin black reference curves are discussed in the text. These have the form $v = v_{\text{gm}}(r_m/r)^n$, where the exponent n equals either 0.5 or 1

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Welcome to AMS News You Can Use.

Each week, we send out a sampling of recent news and items of interest in meteorology and related fields, as covered by various media outlets.

What It Takes To Verify The Hottest Temperatures On Earth

The Verge - August 21, 2020

A blistering 130-degree Fahrenheit (54.4 degrees Celsius) temperature reading in Death Valley, California, on August 16th quickly made headlines, but it could take months or even years before the number can officially break world records.

Hurricane Watch Issued for Louisiana, Texas Coasts as Tropical Storm Laura Strengthens and Moves Into Gulf of Mexico

The Weather Channel - August 25, 2020

Tropical Storm Laura could strengthen quickly into a major hurricane in the Gulf of Mexico with a dangerous threat of storm surge along parts of the Louisiana and Texas coasts, and threats of flooding rain and strong winds will extend well inland later in the week.

New Data Product Warns Alaska Pilots of Clouds, Dangerously Cold Weather

NASA - August 19, 2020

A new product that alerts pilots to clouds, icy conditions and dangerously cold temperatures is tapping into NOAA's Joint Polar Satellite System's satellites for the critical data it needs.

Self-powered wildfire detector could help prevent deadly blazes

Science - August 24, 2020

As wildfires once again rage across California, scientists say they have hit on a cheaper, easier way to detect and warn of such deadly blazes: a new type of forest fire sensor powered by nothing more than the swaying of trees.

How Earth-orbiting satellites are tracking the 2020 hurricane season

Space.com - August 21, 2020

This year's Atlantic hurricane season is ramping up as it enters its period of peak activity, which lasts from mid-August to late October. And, as Earth-orbiting satellites have already detected, it's going to be a doozy.

Scientists create world's most detailed tornado simulations

National Science Foundation - August 24, 2020

At their most extreme, supercell thunderstorms -- those with persistent rotating updrafts -- can spawn tornadoes, causing widespread devastation.

How Birds Respond to Extreme Weather

NASA - August 19, 2020

New research shows that several bird species have already shifted their behavior in response to the sort of hotter and drier weather predicted by climate change models.

Climate change impact on green energy production

ScienceDaily - August 18, 2020

As the climate of the planet is changing, many researchers are looking to more renewable energy sources. Researchers investigate whether the power generated by solar and wind farms would differ between current and future climates.

California wildfires reach historic scale and are still growing

The Washington Post - August 22, 2020

The heat wave and lightning-sparked barrage of California wildfires continues to escalate, with one of the blazes now ranking as the second-largest fire in state history, while another also occupies a spot in the top five.

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Weather Eye with John Maunder

<https://www.sunlive.co.nz/blogs/14971-global-temperatures-1996-july-2020.html>

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